

Application No.: 10/609265
Amendment dated: September 26, 2005
Reply to Office action of July 26, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1-3 (cancelled)

4 (previously presented). A system for dividing gas flow ~~as claimed in claim 1, wherein a gas in a primary flow path is divided into a plurality of secondary flow paths, one of said secondary flow paths being fully opened and the flow rate of gas in each of said secondary flow paths being related to the flow rate of gas in each other one of said secondary flow paths by a predetermined ratio, the system comprising:~~

a plurality of mass flow controllers, there being one of said mass flow controllers arranged to control flow in each said secondary flow path; and

a common controller connected to all of said mass flow controllers; and

a sensor arranged to measure the flow rate of gas in said fully opened secondary flow path, said sensor being connected to said common controller, and providing to said common controller a feedback signal having a value representing the flow rate of gas in said fully opened secondary flow path;

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said common controller including means for generating a set signal for each one of said secondary flow paths, other than said fully opened secondary flow path, by multiplying the value of said feedback signal by a predetermined constant ratio, and delivering the set signal for each of said other secondary flow paths to the mass flow controller therein for controlling the flow therein, each said constant ratio being such that the ratio of the flow rate in each of said other secondary flow paths to the flow rate in said fully opened secondary flow path is 1 or less;

wherein the flow rate in the fully opened secondary flow path is less than the flow rate in another of said secondary flow paths when said another of said secondary flow paths is fully opened; and

wherein each said constant ratio is settable to 1, so that the flow rates in said fully opened flow path and in said another secondary flow paths can be made equal.

5 (previously presented). A system for dividing gas flow ~~as claimed in claim 1~~, wherein a gas in a primary flow path is divided into at least three secondary flow paths, one of said secondary flow paths being fully opened and the flow rate of gas in each of said secondary flow paths being related to the flow rate of gas in each other one of said secondary flow paths by a predetermined ratio, the system comprising:

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a plurality of mass flow controllers, there being one of
said mass flow controllers arranged to control flow
in each said secondary flow path; and
a common controller connected to all of said mass flow
controllers; and
a sensor arranged to measure the flow rate of gas in said
fully opened secondary flow path, said sensor being
connected to said common controller, and providing
to said common controller a feedback signal having a
value representing the flow rate of gas in said
fully opened secondary flow path;
said common controller including means for generating a
set signal for each one of said secondary flow
paths, other than said fully opened secondary flow
path, by multiplying the value of said feedback
signal by a predetermined constant ratio, and
delivering the set signal for each of said other
secondary flow paths to the mass flow controller
therein for controlling the flow therein, each said
constant ratio being such that the ratio of the flow
rate in each of said other secondary flow paths to
the flow rate in said fully opened secondary flow
path is 1 or less; wherein the primary flow path is
divided into at least three secondary flow paths,
and
wherein the flow rate in the fully opened secondary flow
path is less than the flow rate in a first one of
said other secondary flow paths when said first one

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of said other secondary flow paths is fully opened, and the flow rate in said first one of said secondary flow paths when fully opened is less than the flow rate in a second one of said other secondary flow paths when said second one of said other secondary flow paths is fully opened; and wherein each said constant ratio is settable to 1, so that the flow rates in said fully opened flow path and in said first and second other secondary flow paths can be made equal.